RESULT 2
AAF21042
ID AAF21042 standard; DNA; 1376 BP.

XX
AC AAF21042;

XX
DT 14-MAR-2001 (first entry)

XX
DE Human low adenosine antisense oligonucleotide related sequence #2609.

XX
KW Low adenosine antisense oligonucleotide; phosphorothioate; allergy;

Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; cancer; ss.

XX OS Homo sapiens.

KW

KW

KW

KW

KW

KW

KW

KW

KW

XX

XX

XX

XX

XX

XX

XX PT

PT

PT

XX PS

XX

CC

PN W0200062736-A2.

PD 26-OCT-2000.

PF 24-MAR-2000; 2000WO-US08020.

PR 06-APR-1999; 99US-0127958.

XX PA (UYEC-) UNIV EAST CAROLINA.

PA (NYCE/) NYCE J W.

PI Nyce JW;

DR WPI; 2000-679539/66.

Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions -

Disclosure; Page 850; 1592pp; English.

The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central

CC nervous system (CNS) and peripheral nervous and non-nervous system CC receptors, CNS and peripheral nervous and non-nervous system peptide CC transmitters, defensins, growth factors, vasoactive peptides and CC receptors, binding proteins and malignancy associated proteins. The CC antisense oligonucleotides may be used in this way to treat disorders CC including respiratory obstruction (especially pulmonary obstruction CC and/or bronchoconstriction) and/or lung inflammation, allergy(ies) CC and/or surfactant hypoproduction which are associated with a disease or CC condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome CC (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary CC CC hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, CC and/or cancer. AAF18434 to AAF21543 represent human polynucleotide CC fragments and antisense oligonucleotides used in the exemplification of CC CC the present invention. XX

SQ Sequence 1376 BP; 138 A; 526 C; 484 G; 228 T; 0 other;

```
Query Match
                24.7%;
                     Score 967; DB 21; Length 1376;
 Best Local Similarity
                97.0%; Pred. No. 1.8e-155;
 Matches 985; Conservative
                    0; Mismatches
                               30; Indels
                                        0;
                                           Gaps
                                                0;
   2051 ccaqcacccctqqcqcctqacatqaqcccttqcqqqccctcaacctqaqcctqqcqqqc 2110
Qу
      54 ceggeacecetggegeetgaeatgageeettgegggeeeeteaacetgageetggeggge 113
Db
   2111 gaggcgaccacatgcgcggcgccctgggtccccaacacgtcggccgtgccgccgtcgggc 2170
Qу
      Db
   114 gaggegaccacatgegegegeectgggteeccaacaegteggeegtgeegeegteggge 173
Qу
   2171 gcttcgccgcgctgcccatcttctccatgacgctgggcgcgtgtccaacctgctggcg 2230
      Db
   174 gcttcgcccgcgctgcccatcttctccatgacgctggcgcgtgtccaacctgctggcg 233
   2231 ctggcgctgctggcgcaggccgcggggccgctgcgacgccgctcggccgccaccttc 2290
Qу
      Db
   234 ctggcgctgctggcgcaggccgcgggccgcctgcgacgccgctcggccaccaccttc 293
   2291 ctgctgttcgtggccaqcctgctggccaccgacctggcgggccacgtgatcccgggcgcg 2350
Qу
      Db
   294 ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgcg 353
   QУ
      Db
   2411 ggcggctgcatggtcttcttcggcctgtgccgctgctgctgctgqctgtggcatggcqtg 2470
Qу
      414 ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg 473
Db
Qу
   2471 gagcgctgcgtgggcgtcacgcggcgctgctccacgccgcggggtctcggtcgcccgc 2530
      Db
   474 gagegetgegtgggegteaegeggetgeteeaegeegegggteteggtegeege 533
   Qy
```

```
Db
    2591 gcgcgcqtqqqccqctatqaqctqcaqtacccqqqcacqtqqtqcttcatcqqcctqqqt 2650
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       594 gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt 653
Db
   2651 cccccqqqcqqctqqcqccaqqcactqcttqctqqcctcttcqccaqcctcqqcctqqtc 2710
Qу
        Db
    654 cccccqqqcqqctqqccaqqcactqcttqctqqcctcttcqccaqcctcqqcctqqtc 713
Qу
   2711 gcgctcctcgccgctggtgtgcaacacgctcagcgqcctggccctgctacgcgcccgc 2770
       Db
    714 gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgcatcgcgcccgc 773
   2771 tqqcqacqccqctcccqacqqcctccccqqcctcaqqccccqacaqccqqcqtcqctqq 2830
Qу
        774 tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg 833
Db
    2831 ggggcgcacggaccccgctcggcctccqcctcgtccatcgtccatcgcttcggcctcc 2890
Qу
        Db
    834 qqqqcqcacqqaccccqctcqqcctccqcctcqtccqcctcqtccatcqcttcqqcctcc 893
    2891 accttctttggcggctctcggagcagcggctcggcacgcagagctcgcgcccacgacqtg 2950
Qу
        Db
    894 accttctttggcggctctcggagcagcggctcggcacgcagagctcgcgcccacgacgtg 953
QУ
    2951 gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg 3010
        954 gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg 1013
Db
    3011 ctgqtqaqqqqcqcaccqqccctcqaqccacqctccttcccqctccctctcqqc 3065
Qу
        1014 ctggtgttggtggcgctggcggtcggcggcttgagctctacctccctgcagcggc 1068
Db
RESULT
AAA34920
   AAA34920 standard; DNA; 1376 BP.
ID
XX
AC
   AAA34920;
XX
DT
    28-JUL-2000 (first entry)
XX
DE
    Human adenosine receptor related polynucleotide SEQ ID NO: 2609.
XX
KW
    Human; adenosine receptor; low adenosine antisense oligonucleotide;
KW
    phosphorothioate; impaired respiration; inflammation; allergy;
KW
    allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
KW
    antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway;
KW
    lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
    respiratory distress syndrome; pain; cystic fibrosis; emphysema;
KW
KW
    pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
KW
    cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
XX
OS
    Homo sapiens.
XX
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PN
     WO200009525-A2.
XX
PD
     24-FEB-2000.
XX
PF
     03-AUG-1999;
                   99WO-US17712.
XX
PR
     03-AUG-1998;
                   98US-0095212.
XX
PA
     (UYEC-) UNIV EAST CAROLINA.
XX
PΙ
     Nyce JW;
XX
     WPI; 2000-205971/18.
DR
XX
PΤ
     New antisense oligonucleotides useful for treating e.g. pulmonary
     vasoconstriction, inflammation, allergies, asthma, hypertension,
PΤ
РΤ
     bronchitis, emphysema, respiratory distress syndrome, ischemia or
РΤ
     cancers
XX
PS
     Disclosure; Page 779; 1343pp; English.
XX
CC
     The present invention describes a new composition comprising an
     antisense oligonucleotide (ON) with low adenosine (up to 15%), which
CC
CC
     targets nucleic acids involved in bronchoconstriction, allergies, and/or
CC
     inflammation. The ON can have antiinflammatory, antiallergic,
CC
     antiasthmatic, cytostatic and analgesic activities. The compositions are
CC
     useful for the treatment of diseases associated with inflammation,
CC
     impaired airways, including lung disease and diseases whose secondary
     effects afflict the lungs of a subject. They can be used for treating
CC
     e.g. ischaemic conditions, pulmonary vasoconstriction, allergies,
CC
CC
     asthma, impeded respiration, respiratory distress syndrome, pain, cystic
CC
     fibrosis, pulmonary hypertension, emphysema, chronic obstructive
     pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
CC
CC
     carcinomas, and cancers which may metastasise to the lungs, including
CC
     breast and prostate cancer. The reduction of the adenosine content of
CC
     the ONs reduces side effects. The A-containing ONs break down with the
CC
     release of deoxyadenosine which activates adenosine receptors causing
CC
     bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
CC
     nucleotide sequences given in the sequence listing from the present
CC
     invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC
     185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC
     differ from the previously named sequences. SEQ ID NO:11 to 1680
CC
     (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC
     invention. N.B. Sequences given in the disclosure of the present
CC
     invention do not match up with their corresponding SEQ ID NO: sequences
CC
     given in the sequence listing.
XX
SQ
     Sequence 1376 BP; 138 A; 526 C; 484 G; 228 T; 0 other;
  Query Match
                          24.7%; Score 967; DB 21; Length 1376;
                          97.0%; Pred. No. 1.8e-155;
  Best Local Similarity
                                 0; Mismatches
                                                 30; Indels
                                                                            0;
  Matches 985; Conservative
                                                                0; Gaps
Qy
     2051 ccaqcaccctqqcqcctqacatqaqcccttqcqqqqccctcaacctqaqcctqqcqqqc 2110
          Db
       54 ccggcacccctggcgcctgacatgagcccttgcgggcccctcaacctgagcctggcgggc 113
```

QУ	2111	gaggcgaccacatgcgcggcgccctgggtccccaacacgtcggccgtgccgccgtcgggc	2170
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Qу	2171	gcttcgcccgcgctgcccatcttctccatgacgctgggcgccgtgtccaacctgctggcg	2230
Db	174		233
Qу	2231	ctggcgctgctggcgcaggccgcggcgcctgcgacgccgccgccgccaccttc	2290
Db	234	ctggcgctgctggcgcaggccgcggggccgcctgcgacgccgccgctcggccaccaccttc	293
Qу	2291	ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgcg	2350
Db	294	ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgc	
Qу	2351	ctggtgctgcgtctgtacactgcggggcgcgctccggccgg	2410
Db	354	ctggtgctgcgtctgtacactgcgggggcgctccggccgg	413
Qу	2411	ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg	2470
Db	414		473
QУ	2471	<pre>gagcgctgcgtgggcgtcacgcggccgctgctccacgccgcgggtctcggtcgcccgc</pre>	2530
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Qу	2531	<pre>gcgcgctggcgctggccgcggtggccttggccgtggcgctgct</pre>	2590
Db	534	gcgcgctggcgctggccgcggtggccttggccgtggcgctgct	593
Qу	2591	<pre>gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt </pre>	2650
Db	594		653
QУ	2651	cccccgggcggctggcccaggcactgcttgctggcctcttcgccagcctcggcctggtc	2710
Db	654	cccccgggcggctggccaggcactgcttgctggcctcttcgccagcctcggcctggtc	713
QУ	2711	<pre>gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgctacgcgcccgc </pre>	2770
Db	714	gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgcatcgcgcccgc	773
Ολ	2771	tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg	2830
Db	774	tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg	833
Qу	2831	ggggcgcacggaccccgctcggcctccgcctcgtccatcgcttcggcctcc	2890
Db	834	ggggcgcacggaccccgctcggcctccgcctcgtccatcgcttcggcctcc	893
Qλ	2891	accttctttggcggctctcggagcagcggctcggcacgcagagctcgcgcccacgacgtg	2950
Db	894	accttctttggcggctctcggagcagggctcggcacgagggctcgcgacgacgacgtg	953

•

```
2951 gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg 3010
Qy
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Db
    3011 ctggtgagggggcaccggccctcgagccacgctccttcccgctcctctcggc 3065
Qу
         Db
    1014 ctggtgttggtggcgctggccgtcggcggctggagctctacctccctgcagcggc 1068
RESULT
        4
AAQ80287
    AAQ80287 standard; cDNA; 1394 BP.
XX
AC
    AA080287;
XX
DT
    07-JUL-1995 (first entry)
XX
    Prostaglandin receptor EP1 cDNA.
DE
XX
KW
    Prostaglandin receptor; EP1; modulator; therapeutic; ss.
XX
OS
    Homo sapiens.
XX
                   Location/Qualifiers
FH
    Key
                   75..1281
FT
    CDS
FT
                    /*tag= a
                    /note= "EP1"
FT
                    1357..1382
FT
    polyA site
XX
PN
    WO9428125-A.
XX
    08-DEC-1994.
PD
XX
PF
    25-MAY-1994;
                 94WO-CA00296.
XX
PR
    26-MAY-1993; 93US-0068729.
XX
     (MERI ) MERCK FROSST CANADA INC.
PA
     (UYVA-) UNIV VANDERBILT.
PA
XX
    Ford-Hutchinson A, Funk C, Grygorczyk R, Metters K;
PΙ
XX
    WPI; 1995-022797/03.
DR
DR
     P-PSDB; AAR64200.
XX
PT
     Prostaglandin EPI receptor protein, and DNA encoding it - used to
     identify modulators of the prostaglandin receptor.
PT
XX
     Claim 4; Fig 1; 50pp; English.
PS
XX
     DNA encoding prostaglandin receptor EP1 may be cloned in a
CC
     vector for expression in mammalian cells. Recombinant EP1
CC
CC
     can be used to identify modulators of EP1 activity, which are
CC
     useful for the treatment of prostaglandin-related diseases and for
CC
     modulating the effects of prostaglandin on the EP1 receptor.
XX
SO
     Sequence 1394 BP; 158 A; 525 C; 483 G; 228 T; 0 other;
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24.7%; Score 967; DB 16; Length 1394; Query Match Best Local Similarity 97.0%; Pred. No. 1.8e-155; Matches 985; Conservative 0; Mismatches 30; Indels 0; Gaps 0; 2051 ccagcacccctggcgcctgacatgagcccttgcgggcccctcaacctgagcctggcgggc 2110 Qу 54 ccggcacccctggcgcctgacatgagcccttgcgggcccctcaacctgagcctggcggc 113 Db 2111 gaggcgaccacatgcgcggcgccctgggtccccaacacgtcggccgtgccgccgtcgggc 2170 Qу 114 qaqqcqaccacatqcqcqqccctqgqtccccaacacqtcqqccqttqcqccqtcqqqc 173 Db 2171 gcttcgcccgcgctgcccatcttctccatgacgctgggcgccgtgtccaacctgctggcg 2230 Qу 174 gcttcgcccgcgctgcccatcttctccatgacgctgggcgccgtgtccaacctgctggcg 233 Db 2231 ctggcgctgctggcgcaggccgcggggccgcctgcgacgccgccgcctcggccgccaccttc 2290 Qу 234 ctggcgctgctggcgcaggccggggccgcctgcgacgccgccgctcggccaccaccttc 293 Db 2291 ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgcg 2350 Qу 294 ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgcg 353 Db 2351 ctqqtqctqcqtctqtacactqcqgqgcqcqctccqgccgqcqgqgcctqccacttcctq 2410 Qу Db 2411 ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg 2470 Qу 414 ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg 473 Db Qу 2471 gagcgctgcgtgggcgtcacgcggccgctgctccacgccgcggggtctcggtcgcccgc 2530 474 gagcgctgcgtgggcgtcacgcggccgctgctccacgccgcggggtctcggtcgcccgc 533 Db Qу 534 gcgcgctggcgctggccgcggtggccgtggcgctgctgccgctg 593 Db 2591 gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt 2650 Qу 594 gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt 653 Db 2651 cccccqqqcqqctqqcqccaqqcactqcttqctqqcctcttcqccaqcctcqqcctgqtc 2710 Qу 654 cccccgggcggctggcgccaggcactgcttgctggcctcttcgccagcctcggcctggtc 713 Db 2711 gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgctacgcgcccgc 2770 Qу 714 gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgcatcgccccgc 773 Db 2771 tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg 2830 Qу Db 774 tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg 833

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Qv
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         Db
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Qу
    2891 accttctttggcggctctcggagcagcggctcggcacgcagagctcgcgcccacgacgtg 2950
         Db
     894 accttctttggcggctctcggagcagcggctcggcacgcagagctcgcgcccacgacgtg 953
Qу
    2951 gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg 3010
         Db
     954 gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg 1013
Qу
    3011 ctggtgaggggcaccggccctcgagccacgctccttccgctccctctcggc 3065
         Db
    1014 ctggtgttggtggcgctggccgtcggcggctggagctctacctccctqcaqcqqc 1068
RESULT
AAF21047
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XX
AC
    AAF21047;
XX
DT
    14-MAR-2001 (first entry)
XX
DE
    Human low adenosine antisense oligonucleotide related sequence #2614.
XX
    Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
KW
KW
    human; airway disorder; bronchoconstriction; lung inflammation;
KW
    surfactant depletion; respiratory; bronchodilator; antiinflammatory;
KW
    immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
KW
    respiratory obstruction; pulmonary obstruction; impeded respiration;
KW
    surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
KW
    respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
KW
    pulmonary hypertension; emphysema; pulmonary transplantation rejection;
KW
    chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
KW
    cancer; ss.
XX
OS
    Homo sapiens.
XX
PΝ
    WO200062736-A2.
XX
PD
    26-OCT-2000.
XX
PF
    24-MAR-2000; 2000WO-US08020.
XX
PR
    06-APR-1999;
                 99US-0127958.
XX
PA
    (UYEC-) UNIV EAST CAROLINA.
    (NYCE/) NYCE J W.
PA
XX
PΙ
    Nyce JW;
XX
DR
    WPI; 2000-679539/66.
XX
PΤ
    Low adenosine (A) content antisense oligonucleotides which do not
```

trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions -

PТ XX PS

PΤ

Disclosure; Page 852-854; 1592pp; English.

XX CC

CC

CC

CC

CC

CC

CC

CC

CC CC

CC

CC CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC CC

The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system receptors, CNS and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of the present invention.

CC XX SQ

Query Match

Sequence 9060 BP; 1812 A; 2734 C; 2459 G; 2055 T; 0 other;

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24.7%; Score 967; DB 21; Length 9060;
 Best Local Similarity
                   97.0%; Pred. No. 1.9e-155;
 Matches 985; Conservative
                        0; Mismatches
                                    30; Indels
                                               0; Gaps
                                                        0;
   2051 ccagcaccctggcgcctgacatgagcccttgcgggcccctcaacctgagcctggcggc 2110
Qγ
       Db
   2426 ccggcaccctggcgcctgacatgagcccttgcgggcccctcaacctgagcctggcggc 2485
Qу
   2111 gaggcgaccacatgcggggccctgggtccccaacacgtcggccgtgccgccgtcgqgc 2170
       Db
   2486 gaggcgaccacatgcggggccctgggtccccaacacgtcggccgtgccgccgtcgggc 2545
Qу
   2171 gcttcgcccgcgctgcccatcttctccatgacgctgggcgccgtgtccaacctqctqqcq 2230
       Db
   2546 gcttcgcccgcgctgcccatcttctccatgacgctgggcgccgtgtccaacctgctggcg 2605
Qу
   2231 ctggcgctgctggcgcaggccgcctgcgacgccgccgccgccaccttc 2290
       Db
   2606 ctggcgctgctggcgcaggccggggccgcctgcgacgccgctcggccaccaccttc 2665
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2291 ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgcg 2350
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      Db
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   Qу
      Db
   2411 ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg 2470
Qу
      2786 ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg 2845
Db
   2471 gagegetgegtgggegteaegeggeegetgeteeaegeegeggggteteggtegeege 2530
Qу
      2846 gagcgctgcgtgggcgtcacgcggccgctgctccacgccgcggggtctcggtcgccgc 2905
Db
   Qу
      Db
   2591 gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt 2650
Qу
      2966 gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt 3025
Db
   2651 cccccgggcggctggcgccaggcactgcttgctggcctcttcgccagcctcggcctggtc 2710
Qу
      3026 cccccgggcggctggcgccaggcactgcttgctggcctcttcgccagcctcggcctggtc 3085
Db
   2711 gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgctacgcgcccgc 2770
Qу
      Db
   3086 gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgcatcgcgcccgc 3145
   2771 tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg 2830
Qу
      3146 tggcgacgccgctcccgacggcctcccccggcctcaggccccgacagccggcgtcgctgg 3205
Db
   2831\ \mathsf{ggggcgcacggaccccgctcggcctcgcctcgtccatcgcctcgtccatcgcctc}\ 2890
Qу
      3206 ggggcgcacggaccccgctcggcctcgcctcgtccgtccatcgcttcggcctcc 3265
Db
   2891 accttctttggcggctctcggagcagcggctcggcacgcagagctcgcgcgcccacgacgtg 2950
Qу
      3266 accttctttggcggctctcggagcagcggctcggcacgcagagctcgcgcccacgacgtg 3325
Db
   2951 gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg 3010
QУ
      Db
   3326 gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg 3385
   3011 ctggtgagggggcaccggccctcgagccacgctccttcccgctccctctcggc 3065
Qу
      3386 ctggtgttggtggcgctggccgtcggcggctggagctctacctccctgcagcggc 3440
Db
```

ID AAA34925 standard; DNA; 9060 BP.

XX AC AAA34925; XX DT28-JUL-2000 (first entry) XX Human adenosine receptor related polynucleotide SEQ ID NO:2614. DE XX KW Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothicate; impaired respiration; inflammation; allergy; KW allergic disease; bronchoconstriction; inhibitor; antiinflammatory; KW KW antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; KW lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; KW respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; KW cancer; leukaemia; lymphoma; carcinoma; metastasis; ss. KW XX OS Homo sapiens. XX WO200009525-A2. PN XX PD 24-FEB-2000. XX PF 03-AUG-1999; 99WO-US17712. XX PR 03-AUG-1998; 98US-0095212. XX (UYEC-) UNIV EAST CAROLINA. PΑ XX ΡI Nyce JW; XX DR WPI; 2000-205971/18. XX PTNew antisense oligonucleotides useful for treating e.g. pulmonary PT vasoconstriction, inflammation, allergies, asthma, hypertension, PTbronchitis, emphysema, respiratory distress syndrome, ischemia or PTcancers XX Disclosure; Page 781-783; 1343pp; English. PS XX The present invention describes a new composition comprising an CC antisense oligonucleotide (ON) with low adenosine (up to 15%), which CC targets nucleic acids involved in bronchoconstriction, allergies, and/or CC CC inflammation. The ON can have antiinflammatory, antiallergic, CC antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, CC CC impaired airways, including lung disease and diseases whose secondary CC effects afflict the lungs of a subject. They can be used for treating CC e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, CC asthma, impeded respiration, respiratory distress syndrome, pain, cystic CC fibrosis, pulmonary hypertension, emphysema, chronic obstructive CC pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, CC carcinomas, and cancers which may metastasise to the lungs, including CC breast and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the CC CC release of deoxyadenosine which activates adenosine receptors causing CC bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the

nucleotide sequences given in the sequence listing from the present

CC

```
invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC
     185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC
     differ from the previously named sequences. SEQ ID NO:11 to 1680
CC
     (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC
     invention. N.B. Sequences given in the disclosure of the present
CC
     invention do not match up with their corresponding SEQ ID NO: sequences
CC
CC
     given in the sequence listing.
XX
     Sequence 9060 BP; 1812 A; 2735 C; 2459 G; 2054 T; 0 other;
SO
                                 Score 967; DB 21; Length 9060;
                          24.7%;
  Query Match
                         97.0%; Pred. No. 1.9e-155;
  Best Local Similarity
                                                                 0; Gaps
                                 0: Mismatches
                                                 30;
                                                      Indels
  Matches 985; Conservative
```

0;

```
2051 ccagcacccctggcgcctgacatgagcccttgcgggcccctcaacctgagcctggcgggc 2110
Qу
     2426 ccggcacccctggcgcctgacatgagcccttgcgggcccctcaacctgagcctggcgggc 2485
Db
  2111 gaggcgaccacatgcgcgcgccctgggtccccaacacgtcggccgtgccgccgtcgggc 2170
Qу
     2486 gaggcgaccacatgcgcggcgccctgggtccccaacacgtcggccgtgccgccqtcqqqc 2545
Db
  2171 gcttcgcccgcgctgcccatcttctccatgacgctgggcgccgtgtccaacctgctggcg 2230
Qу
     2546 gcttcgcccgcgctgcccatcttctccatgacgctgggcgccgtgtccaacctgctggcg 2605
Db
  2231 ctggcgctgctggcgcggcggcggcgcctgcgacgccgccgccgccaccttc 2290
Qу
     2606 ctggcgctgctggcgcaggccgcggggcgcctgcgacgccgctcggccaccaccttc 2665
Db
   2291 ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgcg 2350
Qy
      2666 ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgcg 2725
Db
   Qу
      Db
   2411 ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg 2470
Qу
      2786 ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg 2845
Db
   2471 gagcgctgcgtgggcgtcacgcggccgctgctccacgccgggggtctcggtcgccgc 2530
Qу
      2846 gagcgctgcqtqqqcqtcacqcqqccqctqctccacqccqcggggtctcggtcgccgc 2905
Db
   Qу
      Db
   2591 gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt 2650
Qу
      2966 gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt 3025
Db
   2651 cccccgggcggctggcgccaggcactgcttgctggcctcttcgccagcctcggcctggtc 2710
Qу
```

```
Qу
    2711 gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgctacgcgcccgc 2770
        3086 gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgcatcgcgcccgc 3145
Db
    2771 tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg 2830
Qу
        Db
    3146 tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg 3205
    2831 ggggcgcacggaccccgctcggcctccgcctcgtccgctcgtccatcgcttcggcctcc 2890
Qу
        Db
    3206 ggggcgcacggaccccgctcggcctccgcctcgtccgcctcgtccatcgcttcggcctcc 3265
    2891 accttetttggeggeteteggageageggeteggeaegeagageteggeeeaegaegtg 2950
Qу
        Db
    3266 accttctttggcggctctcggagcagcggctcggcacgcagagctcgcgcccacgacgtg 3325
    2951 gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg 3010
Qу
        Db
    3326 gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg 3385
Qу
    3011 ctggtgaggggcgcaccggccctcgagccacqctccttcccgctccctctcggc 3065
        Db
    3386 ctggtgttggtggcgctggccgtcggcggctggagctctacctccctgcagcggc 3440
RESULT
AAZ93894
ID
    AAZ93894 standard; DNA; 1226 BP.
XX
AC
    AAZ93894;
XX
    25-SEP-2000 (first entry)
DT
XX
DE
    Human EP-1 prostaglandin receptor coding sequence.
XX
KW
    Prostaglandin; receptor; pulmonary system; glaucoma;
KW
    identification; allele; polymorphism; detection; prostanoid; FP;
KW
    IP; DP; EP; TP; human; ds.
XX
OS
    Homo sapiens.
XX
FΗ
    Key
                 Location/Qualifiers
FT
    CDS
                 1..1209
FΤ
                 /*tag= a
                 /product= EP-1 prostaglandin receptor
FΤ
FT
    allele
                 replace (264,Y)
FT
                 /*tag= b
FT
    allele
                 replace (767,R)
FT
                 /*tag= c
FT
    allele
                 replace (816,Y)
                 /*tag= d
FT
FT
    allele
                 replace (999,R)
FT
                 /*tag= e
XX
ΡN
    WO200029614-A1.
```

3026 cccccgggcgctggcgccaggcactgcttgctggcctcttcgccagcctcggcctggtc 3085

Db

```
XX
    25-MAY-2000.
PD
XX
PF
    12-NOV-1998;
                98WO-IB01803.
XX
PR
    12-NOV-1998;
                98WO-IB01803.
XX
PΑ
    (EURO-) EURONA MEDICAL AB.
XX
PΙ
    Jonsson L, Lindstroem HR;
XX
    WPI; 2000-387820/33.
DR
    P-PSDB; AAY83411.
DR
XX
PT
    Assessing prostanoid response status in an individual suffering from
    prostaglandin associated diseases such as pulmonary hypertension,
PT
    glaucoma or arteriosclerosis, comprises comparing polymorphic patterns
PT
XX
PS
    Claim 20; Fig 2; 57pp; English.
XX
CC
    The prostaglandin receptor family encompasses at least five classes
    of receptors designated FP, EP, IP, DP and TP receptors which are
CC
    classified based on their sensitivity to the five primary prostanoids
CC
    (F2alpha, E 2, I 2, D 2 and TXA 2). EP receptors further comprise
CC
    four subtypes, designated EP1-4, which differ in their responses to
CC
    various agonists and antagonists. The receptors have also shown a
CC
    degree of cross reactivity. They may derive from a common ancestral
CC
    gene. All of the receptors may exist as allelic variants and these
CC
CC
    polymorphisms may have an affect on a patients reaction to
CC
    prostanoids. Detection of these polymorphisms may identify patients
CC
    at risk from toxic or abnormal responses to prostanoid treatment.
CC
    The prostaglandins play a role in the pulmonary system and in
CC
    glaucoma.
XX
SQ
    Sequence 1226 BP; 111 A; 475 C; 430 G; 210 T; 0 other;
 Query Match
                      24.2%; Score 949.2; DB 21; Length 1226;
                     97.2%; Pred. No. 1.9e-152;
 Best Local Similarity
 Matches 966; Conservative
                           0; Mismatches
                                          28;
                                              Indels
                                                       0; Gaps
                                                                 0;
    QУ
        Db
       1 atgagecettgegggeeectcaacetgageetggegggggaggaeeacatgegeggeg 60
    2132 ccctqqqtccccaacacqtcqqccqtqccqccqtcqqqcqcttcqcccqcqctqcccatc 2191
QУ
         Db
      61 ccctgggtccccaacacgtcggccgtgccgccgtcgggcgcttcgcccgcgctgcccatc 120
Qу
    Db
     121 ttctccatgacgctgggcgccgtgtccaacctgctggcgctggcgctgctggcgcaggcc 180
    2252 gcgggccgcctgcgacgccgccgccgccaccttcctgctgttcgtggccagcctg 2311
Qу
        Db
     181 gcgggccgcctgcgacgccgctcggccaccaccttcctgctgttcgtggccagcctg 240
```

```
2312 ctggccaccgacctggcgggccacgtgatcccgggcgcgctggtgctgcgtctgtacact 2371
Qу
      241 ctggccaccgacctggcgggccacgtgatcccgggcgcgctggtgctgcgtctgtacact 300
Db
   2372 gcgggggggcgctccggccggggggcctgccacttcctgggcggctgcatggtcttcttc 2431
Qу
      301 gcggggcgctccggccggcggggcctgccacttcctgggcggctgcatggtcttcttc 360
Db
   2432 ggcctgtgcccgctgctgctgggctgtggcatggccgtggagcgctgcgtgggcgtcacg 2491
Qу
      361 ggcctgtgcccgctgctgctgggctgtggcatggccgtggagcgctgcgtgggcgtcacg 420
Db
   QУ
      Db
   2552 gtggccgcggtggccttggccgtggcgctgctgccgctggcgcgcgtgggccgctatgag 2611
Qу
      481 qtqqccqcqqtqqccttqqccqtgqcqctqctqccqctgqcqcqcqtqgqccqctatqag 540
Db
Qу
   2612 ctgcagtacccgggcacgtggtgcttcatcggcctgggtcccccgggcggctggcgccag 2671
      Db
    541 ctgcagtacccgggcacgtggttcatcggcctgggtcccccgggcggctggccag 600
   2672 gcactgcttqctqqcctcttcqccaqcctcqqcctggtcqcqctcctcqccqcqctgqtg 2731
QУ
      601 gcactgcttgctggcctcttcgccagcctcggcctggtcgcgctcctcgccgcgctggtg 660
Db
Qу
   2732 tgcaacacgctcagcggcctggccctgctacgcgcccgctggcgacgccgctcccgacgg 2791
      Db
    661 tgcaacacgctcagcggcctggccctgctacgcgcccgctggcgacgccgctcccgacgg 720
   2792 cctcccccggcctcaggccccgacagccggcgtcgctgggggggcgcacggaccccgctcg 2851
Qу
      Db
    2852 gcctccgcctcgtccgcctcgtccatcgcttcggcctccaccttctttggcggctctcgg 2911
Qу
      Db
    781 gcctccgcctcgtccgctcgtccatcgcttcggcgtccaccttctttggcggctctcgg 840
   2912 agcagcggctcggcacgcagagctcgcgcccacgacgtggagatggtgggccagcttgtc 2971
Qу
      841 agcaqcqqctcqqcacqcaqaqctcqcqcccacqacqtqqaqatqgtqqqccaqcttqtc 900
Db
   2972 ggtatcatggtggtgtcgtgcatctgctggagcccaatgctggtgagggggcgcaccggcc 3031
Qу
      901 ggtatcatggtggtgtcgtgcatctgctggagcccaatgctggtgttggtggcgctggcc 960
Db
   3032 cctcgagccacgctccttcccgctcctctcggc 3065
Qу
         961 gtcggcggctggagctctacctccctgcagcggc 994
Db
```

RESULT 8 ABI98018

ID ABI98018 standard; cDNA; 1209 BP.

XX

```
AC
    ABI98018;
XX
DΤ
    18-FEB-2002 (first entry)
XX
DΕ
    Non-endogenous human GPCR cDNA, SEQ ID NO: 556.
XX
KW
    Human; G protein-coupled receptor; GPCR; non-endogenous; mutant;
KW
    constitutively activated GPCR; agonist; disease; ss.
XX
OS
    Homo sapiens.
OS
    Synthetic.
XX
    WO200177172-A2.
PN
XX
    18-OCT-2001.
PD
XX
    05-APR-2001; 2001WO-US11098.
PF
XX
PR
    07-APR-2000; 2000US-195747P.
XX
PA
    (AREN-) ARENA PHARM INC.
XX
    Lehmann-Bruinsma K, Liaw CW, Lin I;
PΙ
XX
    WPI; 2001-648759/74.
DR
DR
    P-PSDB; ABB56382.
XX
    Identifying agonists of G protein-coupled receptors (GPCRs) for use in
PT
    disease treatment, comprises contacting candidate compounds with
PΤ
PΤ
    versions of GPCRs -
XX
PS
    Example 2; Page 358; 394pp; English.
XX
CC
    The invention relates to G protein-coupled receptors (GPCRs) for which
CC
    the endogenous ligand has been identified. Non-endogenous
    constitutively activated versions of known GPCRs are used in the
CC
CC
    invention for the direct identification of candidate compounds as
CC
    receptor agonists, inverse agonists or partial agonists. Such
    agonists are useful as therapeutic agents for diseases or disorders
CC
    associated with GPCRs. The present sequence encodes a non-endogenous
CC
    version of a known human GPCR.
CC
XX
    Sequence 1209 BP; 107 A; 469 C; 424 G; 209 T; 0 other;
SO
                             Score 944.4; DB 23; Length 1209;
                       24.1%;
  Ouery Match
                       96.9%; Pred. No. 1.2e-151;
  Best Local Similarity
  Matches 963; Conservative 0; Mismatches 31; Indels
                                                         0; Gaps
                                                                   0;
Qу
    Db
       2132 ccctgggtccccaacacgtcggccgtgccgccgtcgggcgcttcgcccgcgctgcccatc 2191
Qу
         61 ccctgggtccccaacacgtcggccgtgccgccgtcgggcgcttcgcccgcgctgcccatc 120
Db
```

QУ		ttctccatgacgctgggcgcgtgtccaacctgctggcgctggcgctgctggcgcaggcc	
Db	121	ttctccatgacgctgggcgccgtgtccaacctgctggcgctggcgctgctggcgcaggcc	180
Qу	2252	gcgggccgcctgcgacgccgccgctcggccgccaccttcctgctgttcgtggccagcctg	2311
Db	181	gcgggccgcctgcgacgccgccgctcggccaccaccttcctgctgttcgtggccagcctg	240
QУ	2312	ctggccaccgacctggcgggccacgtgatcccgggcgcgctggtgctgcgtctgtacact	2371
Db	241	ctggccaccgacctggcgggccacgtgatcccgggcgcgctggtgctgctgtacact	300
Qу	2372	gcggggcgctccggccggcggggcctgccacttcctgggcggctgcatggtcttcttc	2431
Db	301	gcggggcgcgctccggccggcggggcctgccacttcctgggcggctgcatggtcttcttc	360
Qу	2432	ggcctgtgcccgctgctgctgggctgtggcatggccgtggagcgctgcgtgggcgtcacg	2491
Db	361	ggcctgtgcccgctgctgctgggctgtggcatggccgtggagcgctgcgtgggcgtcacg	420
Qу	2492	cggccgctgctccacgccgcgggtctcggtcgcccgcgcgcg	2551
Db	421	cggccgctgctccacgccgcgggtctcggtcgcccgcgcgcg	480
Qу	2552	gtggccgcggtggccttggccgtggcgctgctgccgctggcgcgcgtgggccgctatgag	2611
Db	481	gtggccgcggtggccttggccgtggcgctgctgccgctggcgcgcgtgggccgctatgag	540
Qу	2612	ctgcagtacccgggcacgtggtgcttcatcggcctgggtcccccgggcggctggcgccag	2671
Db	541	ctgcagtacccgggcacgtggtgcttcatcggcctgggtcccccgggcggctggcgccag	600
Qу	2672	gcactgcttgctggcctcttcgccagcctcggcctggtcgcgctcctcgccgcgctggtg	2731
Db	601	gcactgcttgctggcctcttcgccagcctcggcctggtcgcgctcctcgccgcgctggtg	660
QУ	2732	tgcaacacgctcagcggcctggccctgctacgcgcccgctggcgacgccgctcccgacgg	2791
Db	661	tgcaacacgctcagcggcctggcctgcatcgcgccgctggcgacgccgctcccgacgg	720
Qу	2792	cctccccggcctcaggccccgacagccggcgtcgctgggggggcgcacggaccccgctcg	2851
Db	721	cctccccggcctcaggccccgacagccggcgtcgctgggggggcgcacggaccccgctcg	780
Qу	2852	gcctccgcctcgtccgcctcgtccatcgcttcggcctccaccttctttggcggctctcgg	2911
Db	781	gcctccgcctcgtccatcgtccatcgcctccaccttctttggcggctctcgg	840
Qу	2912	agcagcggctcggcacgcagagctcgcgcccacgacgtggagatggtgggccagcttgtc	2971
Db	841		900
Qу	2972	ggtatcatggtggtgtcgtgcatctgctggagcccaatgctggtgaggggcgcaccggcc	3031
Db	901	ggtatcatggtggtgtcgtgcatctgctggagcccaatgctggtgttggtggcgctggcc	960
Qу	3032	cctcgagccacgctccttcccgctccctctcggc 3065	

.

Db 961 gtcggcggctggagctctacctccctgcagcggc 994

U5/0X3

```
RESULT
       1
US-08-068-729-3
; Sequence 3, Application US/08068729
; Patent No. 5985597
  GENERAL INFORMATION:
    APPLICANT: Ford-Hutchinson, Anthony
    APPLICANT: Funk, Colin
    APPLICANT: Grygorczyk, Richard
    APPLICANT: Metters, Kathleen
    TITLE OF INVENTION: DNA Encoding Prostaglandin Receptor EP1
    NUMBER OF SEQUENCES: 6
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: JOHN W. WALLEN III
      STREET: P.O. BOX 2000, 126 E. LINCOLN AVE.
;
      CITY: RAHWAY
      STATE: NEW JERSEY
      COUNTRY: USA
      ZIP: 07065
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/068,729
      FILING DATE: 26-MAY-1993
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: WALLEN, JOHN W III
      REGISTRATION NUMBER: 35,403
      REFERENCE/DOCKET NUMBER: 19012
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (908) 594-3905
      TELEFAX: (908) 594-4720
  INFORMATION FOR SEQ ID NO: 3:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 1394 base pairs
      TYPE: nucleic acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: cDNA
US-08-068-729-3
  Query Match
                        24.7%; Score 967; DB 2; Length 1394;
  Best Local Similarity 97.0%; Pred. No. 4.3e-171;
  Matches 985; Conservative 0; Mismatches
                                              30; Indels
                                                            0; Gaps
                                                                       0;
     2051 ccaqcacccctggcgcctgacatgagcccttgcgggcccctcaacctgagcctggcgggc 2110
Qу
         Db
       54 CCGGCACCCCTGGCGCCTGACATGAGCCCTTGCGGGCCCCTCAACCTGAGCCTGGCGGGC 113
     2111 gaggcgaccacatgcgcgcgccctgggtccccaacacgtcggccgtgccgccgtcgggc 2170
Qу
         Db
      114 GAGGCGACCACATGCGCGCGCCCTGGGTCCCCAACACGTCGGCCGTGCCGCCGTCGGGC 173
     2171 gcttcgcccgcgctgcccatcttctccatgacgctgggcgccgtgtccaacctgctggcg 2230
Qу
```

Db	174		233
Qу	2231	ctggcgctgctggcgcaggccgcggggccgcctgcgacgccgccgccgccaccttc	2290
Db	234	CTGGCGCTGCTGGCGCAGGCCGCGGGCCGCCGCCGCCGCCGCCGCCACCAC	293
Qу	2291	ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgcg	2350
Db	294	CTGCTGTTCGTGGCCAGCCTGCTGGCCACCGACCTGGCGGCCACGTGATCCCGGGCGCG	353
Qу	2351	ctggtgctgcgtctgtacactgcggggcgctccggccggc	2410
Db	354	CTGGTGCTGCGTCTGTACACTGCGGGGGCGCGCCGCCGGCGGGGGCCTGCCACTTCCTG	413
Qу	2411	ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg	2470
Db	414	GGCGGCTGCATGGTCTTCTTCGGCCTGTGCCCGCTGCTGCTGGCCTGTGGCATGGCCGTG	473
QУ	2471	gagcgctgcgtgggcgtcacgcggccgctgctccacgccgcgggtctcggtcgcccgc	2530
Db	474	GAGCGCTGCGTCGCGCGCCGCCGCCCCCCCCCCCCCCCC	533
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QУ	2591	gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt	2650
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Qу	2711	gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgctacgcgcccgc	2770
Db	714	GCGCTCCTCGCCGCGCTGTGTGCAACACGCTCAGCGGCCTGGCCCTGCATCGCGCCCGC	773
Qу	2771	tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg	2830
Db	774	TGGCGACGCCTCCCGACGCCTCCCCGGCCTCAGGCCCGACAGCCGGCGTCGCTGG	833
Qу	2831	ggggcgcacggaccccgctcggcctccgcctcgtccgcctcgtccatcgcttcggcctcc	2890
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Qу	2951	gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg	3010
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RESULT
US-09-255-671-3
; Sequence 3, Application US/09255671
; Patent No. 6031079
  GENERAL INFORMATION:
    APPLICANT: Ford-Hutchinson, Anthony
    APPLICANT: Funk, Colin
    APPLICANT: Grygorczyk, Richard
    APPLICANT: Metters, Kathleen
    TITLE OF INVENTION: DNA Encoding Prostaglandin Receptor EP1
;
    NUMBER OF SEQUENCES: 6
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: JOHN W. WALLEN III
      STREET: P.O. BOX 2000, 126 E. LINCOLN AVE.
      CITY: RAHWAY
     STATE: NEW JERSEY
     COUNTRY: USA
     ZIP: 07065
    COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/09/255,671
      FILING DATE:
      CLASSIFICATION:
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/068,729
      FILING DATE: 26-MAY-1993
    ATTORNEY/AGENT INFORMATION:
     NAME: WALLEN, JOHN W III
      REGISTRATION NUMBER: 35,403
      REFERENCE/DOCKET NUMBER: 19012
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (908) 594-3905
      TELEFAX: (908) 594-4720
  INFORMATION FOR SEQ ID NO: 3:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 1394 base pairs
      TYPE: nucleic acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: cDNA
US-09-255-671-3
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  Query Match
  Best Local Similarity 97.0%; Pred. No. 4.3e-171;
  Matches 985; Conservative 0; Mismatches 30; Indels
                                                          0; Gaps
Qу
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          54 CCGGCACCCTGGCGCCTGACATGAGCCCTTGCGGGCCCCTCAACCTGAGCCTGGCGGGC 113
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Db	174	GCTTCGCCCGCGCTGCCCATCTTCTCCATGACGCTGGGCGCCGTGTCCAACCTGCTGGC	233
Qу	2231	ctggcgctgctggcgcaggccgccgcctgcgacgccgccgccgccaccttc	2290
Db	234	CTGGCGCTGCTGGCGCAGGCCGCGGGCCGCCTGCGACGCCGCCGCCACCACCTTC	293
Qу	2291	ctgctgttcgtggccagcctgctggccaccgacctggcgggccacgtgatcccgggcgcg	2350
Db	294	CTGCTGTTCGTGGCCAGCCTGCTGGCCACCGACCTGGCGGGCCACGTGATCCCGGGCGCG	353
Qу	2351	ctggtgctgcgtctgtacactgcggggcgctccggccggc	2410
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Qу	2411	ggcggctgcatggtcttcttcggcctgtgcccgctgctgctgggctgtggcatggccgtg	2470
Db	414	GGCGGCTGCATGGTCTTCTTCGGCCTGTGCCCGCTGCTGGGCTGTGGCATGGCCGTG	473
Qу	2471	gagcgctgcgtgggcgtcacgcggccgctgctccacgccgcgggtctcggtcgcccgc	2530
Db	474	GAGCGCTGCGTGGGCGTCACGCGGCCGCTGCTCCACGCCGCGCGGGTCTCGGTCGCCCGC	533
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Qу	2591	gcgcgcgtgggccgctatgagctgcagtacccgggcacgtggtgcttcatcggcctgggt	2650
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Qу	2711	gcgctcctcgccgcgctggtgtgcaacacgctcagcggcctggccctgctacgcgcccgc	2770
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Qу	2771	tggcgacgccgctcccgacggcctccccggcctcaggccccgacagccggcgtcgctgg	2830
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QУ	2831	ggggcgcacggaccccgctcggcctccgcctcgtccatcgcttcggcctcc	2890
Db	834	GGGGCGCACGGACCCCGCTCGGCCTCGTCCGCCTCGTCCATCGCTTCGGCCTCC	893
Qy	2891	accttctttggcggctctcggagcagcggctcggcacgcagagctcgcgcccacgacgtg	2950
Db	894	ACCTTCTTTGGCGGCTCTCGGAGCAGCGCTCGGCACGCAGAGCTCGCCCCACGACGTG	953

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Qу	2951	gagatggtgggccagcttgtcggtatcatggtggtgtcgtgcatctgctggagcccaatg	3010
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Ov	3011	ctggtgagggggcaccggccctcgagccacgctccttcccgctccctctcggc 3065	
Db	1014	CTGGTGTTGGTGGCGCTGGCCGTCGGCGGCTGGAGCTCTACCTCCCTGCAGCGGC 1068	